

## אנגלית

### Module F

#### **PART I: ACCESS TO INFORMATION FROM WRITTEN TEXTS (60 points)**

Read the text below and then answer Questions 1-6.

#### GOING TO MARS? HERE'S WHAT YOU'LL EAT

Sending people into space is never an easy task, and the longer the trip the greater the challenges involved. Now the American Space agency NASA is planning to send astronauts farther than ever before, on a flight to the planet Mars. As the trip could last up to three years, special efforts must be made to ensure their welfare. One central  
5 problem is how to provide the crew with a sufficient supply of food that meets their requirements. Our reporter spoke to Dr. Lisa Brown, head of a team of NASA food engineers looking for a good solution.

**Space flights are nothing new. Hasn't suitable food for astronauts already been developed?**

10 Of course, a lot of progress has been made since the first space flight in the 1960s. Back then the food came in the form of liquids and pills, which had all the right nutrients but was so tasteless that astronauts returned to Earth with most of their "meals" uneaten. NASA was therefore forced to look for better options, and by the 1980s we managed to produce specially packaged meals of real food, which were a  
15 great improvement. However, several changes must be made before we can use them on a trip to Mars as well.

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### **Why is that?**

20 Just do the math: six astronauts living in space for three years would require no less than 20 tons of food. We're currently testing various ways to reduce that weight. Moreover, existing packaging methods only keep food fresh for about 18 months, so we're experimenting with new materials and techniques that will do the job for the duration of the trip. But even if these problems are solved, we won't be able to rely exclusively on packaged meals for this trip because of the psychological factor  
25 even on shorter flights, astronauts often complain that the meals soon become extremely monotonous.

### **So What have you achieved so far?**

We've taken the first steps towards growing some of the food in the spacecraft itself. Of course, it's not easy to make crops grow in an environment where conditions are  
30 so different from those on Earth: there is no natural light, and even supplying plants with water and nutrients is difficult because liquids behave differently in space. But we've already managed to grow several kilos of lettuce and radishes in a Space-like environment, and now we're trying to expand the range of crops. If we succeed, we could not only reduce the amount of food that has to be sent on a flight to Mars, but  
35 also introduce some much-needed variety into the astronauts' menu. Imagine how amazing it would be for them to travel so far from Earth, and still be able to enjoy a salad of freshly picked vegetables.

**QUESTIONS (60 points)**

Answer questions 1-6 in English, according to the text. In questions 1,2 and 5, circle the number of the correct answer. In the other questions, follow the instructions.

**1. What are we told in lines 1-7?**

- (i) Why NASA is planning a trip to Mars.
- (ii) Why the trip to Mars will last three years.
- (iii) How much food astronauts need.
- (iv) What Dr. Brown's team is responsible for.

(7 points)

**2. Why will a trip to Mars present different challenges from earlier space trips?**

(lines 1-7)

- (i) Because of the preparation astronauts will need.
- (ii) Because of the tasks to be performed in space.
- (iii) Because of the duration of the trip.
- (iv) Because of the size of the crew.

(8 points)

**3. COMPLETE THE SENTENCE.**

In lines 10-16, Dr. Brown explains why astronauts in the 1960s.....

.....

(8 points)

**4. How is Dr. Brown's team trying to solve the problems related to the flight to Mars? Give the TWO ways mentioned in lines 18-25.**

(1) .....

(2) .....

(2x8=16 points)

5. Lettuce and radishes are given as examples of (-). (lines 27-36)

- (i) astronauts' favorite vegetables
- (ii) vegetables that have already been grown in space
- (iii) vegetables that astronauts could eat in space
- (iv) highly nutritious vegetables.

(7 points)

6. What is presented in lines 27-36?

PUT A V BY THE TWQ CORRECT ANSWERS.

- ..... i) Different kinds of space-like environments.
- ..... ii) Different ways of growing plants in space.
- ..... iii) Reasons why growing plants in space is difficult.
- ..... iv) Alternatives to growing food in space.
- ..... v) The benefits of growing food in the spacecraft.
- ..... vi) Ways of packaging the food used in a spacecraft.

(2x7=14 points)

**PART II: WRITTEN PRESENTATION (40 points)**

Write 120-140 words in English on the following topic.

7. Your school newspaper has asked readers to write about good or bad advice they were given.

Choose a piece of advice and write a passage for the newspaper describing the situation in which it was given (for example, you needed to solve a problem or make a decision), and how it helped you or why it did not help you.

The advice and / or the situation may be real or imaginary.